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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)
742113-35

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Signature _____

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Application Number	Filed
10/541,792	03/08/2006

First Named Inventor: Henrik Guldmann RASMUSSEN

Art Unit	Examiner
3744	William E. Tapolcai

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

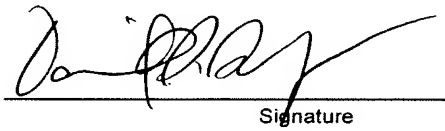
I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☑ attorney or agent of record. Registration number 27,997.

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____



Signature

David S. Safran
Typed or printed name

703-584-3273
Telephone number

May 7, 2009
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
Submit multiple forms if more than one signature is required, see below*.

☑ *Total of two forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Docket No. 742113-35

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	)	**RESPONSE UNDER 37 CFR 1.116**
Henrick Guldmann RASMUSSEN	)	**EXPEDITED PROCEDURE**
Application No. 10/541,792	)	**EXAMINING GROUP 3744**
Filed: March 8, 2006	)	Examiner: William E. Tapolcai
For: CONVEYOR SCREW FOR USE AS SURFACE SCRAPER IN COOLING AND FREEZING UNITS	)))	Confirmation No. 4141

ARGUMENTS IN SUPPORT OF

REQUEST FOR PRE-APPEAL BRIEF PANEL REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The following is submitted in support of the accompanying Request for Pre-Appeal Brief Review of the Final Office Action issued February 13, 2009, in connection with the above-captioned patent application.

ARGUMENTS

Claims 1-10, 23 and 24 have been rejected under 35 USC § 103 as being unpatentable over the Chen patent. This rejection is inappropriate for the following reasons.

Independent claim 1 is directed to a "conveyor" screw having flights that extend from "an inlet end part of the conveyor screw to an outlet end part of the conveyor screw. Inherently, such recitations require screw flights that are able to move material from one end of the flights to the other. However, Chen discloses an "agitator" screw, not a conveyor screw, and its flights are neither intended to nor capable of functioning as a conveyor, a fact that should be abundently apparent from the fact that "the inner spiral vane 20 is left-handed while the outer spiral vane 23 is right-handed" so that the "mixture will be moved to and from along the axle 11 thereby stirring the mixture thoroughly" (column 3, 16-19). That is, because one vane acts to move the mixture to the left while the other acts to move it to the right the result is that the mixture is merely agitated and mixed, but cannot be conveyed from an inlet end to an outlet end. Moreover, claim 1 requires that the two flights extend in parallel which is clearly not the case since one of Chen's flights is left-handed and the other is right-handed and the drawings show the anti-parallel nature thereof with the inner flight going radially outward when the outer flight is going radially inward and *vice verse*.

The above noted facts have not been addressed by the Examiner who, in his Advisory Action mistakenly asserts that "[t]here are no recited elements that distinguish the claims over the structure disclosed in Chen. The mere recitation in the preamble of the claims of a "conveyor" screw is considered to be a functional recitation and a statement of intended use, and not a positive structural limitation." However, this statement by the Examiner is in direct conflict with Office policy as set forth in the MPEP and established case law. MPEP 2173.05(g) sets forth with regard to functional recitation:

> A functional limitation is an attempt to define something by what it does, rather than by what it is (e.g., as evidenced by its specific structure or specific ingredients). There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971).
>
> A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. A functional limitation is

> often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step.

Furthermore, as noted by the Board of Appeals in its decision of *Ex parte Bylund*, 217 USPQ 492, 498 (1981) "Contrary to the examiner's assertions, functional language in the claims must be given full weight and may not be disregarded in evaluating the patentability of the subject matter defined employing such subject matter." Furthermore, the Federal Circuit and its predecessor court, the CCPA, repeatedly have held that cited prior art must be at least inherently capable of performing a recited function (see, e.g., *In re Venezia*, 530 F.2d 956, 959, 189 USPQ 149, 151-52 (CCPA 1976) "This limitation sets forth a function which the claimed apparatus must be structurally capable of performing"), and that the preamble cannot be ignored where the body of the claim breathes "life, meaning and vitality" to it as noted in MPEP § 2111.02:

> "[A] claim preamble has the import that the claim as a whole suggests for it." *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed. Cir. 1995). "If the claim preamble, ***when read in the context of the entire claim***, recites limitations of the claim, or, if the claim preamble ***is 'necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim.***" *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999). (Emphasis Added)

In the present case, the body vitalizes the preamble recitation of a conveyor screw by requiring that the screw have both "an inlet end part" and also "an outlet end part." As recognized by the Examiner, Chen merely discloses an agitator screw, and for the reasons noted above, it is incapable of conveying anything, having neither an inlet end nor an outlet end.

Furthermore, claim 1 requires that the radially shorter of the two flights be "in a range of 0.85 to 0.98 times the radius of the radially longer of the screw flights." The Examiner has acknowledged that Chen does not disclose such a relationship between his two screw flights, and has improperly ignored this limitation on the based that he considers the relative distances of the two screws to be "matters of obvious design choice to one of ordinary skill" without any explanation of how he reached such a conclusion and has mistakenly asserted in his Advisory Action that "there is still no statement of why this particular range of ratios is

critical. However, to the contrary, Applicant has disclosed an advantage to this relationship in the next-to-last paragraph of page 5 where it is stated that:

> In order to lower the necessary inlet pressure for a conveyance apparatus with the said conveyor screw, **it is an advantage that** said at least two screw flights extend over an inlet end part of the conveyor screw so that ***the radially shorter screw flights, e.g. 0,85-0,98 times the radius of the longer screw flight,*** **increases the conveyance near the inlet end and thereby increases the inlet suction of the conveyance apparatus.** (Emphasis Added.)

Since Chen has no inlet and his screw performs no conveyance, what could make it obvious to one of ordinary skill to give his screw characteristics that are designed to produce increases in inlet suction? MPEP § 2144.05 is specifically directed to the obviousness of ranges, and in this section it is stated with respect to the optimization of ranges that:

> B. Only Result-Effective Variables Can Be Optimized
>
> A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) (The claimed wastewater treatment device had a tank volume to contractor area of 0.12 gal./sq. ft. The prior art did not recognize that treatment capacity is a function of the tank volume to contractor ratio, and therefore the parameter optimized was not recognized in the art to be a result- effective variable.).

Here, there is no indication in Chen, or other evidence, that the radial height of the inner flight relative to the outer flight is a "result-effective variable" for any reason, let alone for achieving the benefit sought by the present applicant. In fact, given Chen's agitating function, there is no reason to even believe that the screw would be operational for his intended agitating function if the inner vane was between 85 and 95% of the height of the outer flight since only be a minimal gap would exist between the oppositely directed flights thereby inhibiting the counter-flow mixing effect sought by Chen. Accordingly, the Examiner's assertions that the recited radial height range lacks patentable significance and that using such ranges for Chen's screw is a mere obvious design choice are contrary to Office policy and the law as well as contrary to the existing facts.

Claims 11, 12 & 14-22 been rejected under 35 USC § 103 as being unpatentable over Hoffmann et al. patent (hereafter, Hoffmann) when viewed in combination with the Chen

patent. However, this combination of references is both illogical and incapable of resulting in the claimed invention.

First, since all of these claims require a conveyor screw (or the use thereof) which has all of the characteristics of the conveyor screw of claim 1, merely using the Chen screw in the Hoffmann apparatus and process would result in an apparatus and process that is distinguishable from that claimed in this application for all of the reasons indicated above. However, it would be illogical, and thus, unobvious, to replace the conveying screw of Hoffmann with the agitator screw of Chen since it would clearly render Hoffmann's method and apparatus inoperative. That is Chen's use of left and right hand flights on a single shaft to move a mixture to-and-fro for mixing purposes, would prevent orderly conveyance of the ice cream mixture of Hoffmann, likely resulting in freeze-up and break-down of the apparatus.

The Examiner has failed to provide a plausible explanation as to why anyone of any skill in the art would have any reason to use an agitator screw as disclosed by Chen in place of the conveyor screw Hoffmann, and applicant submits that no valid reason for doing so exists, either derivable from the applied references or from anything known to those of ordinary skill in the art. The mere fact that Hoffmann's screw will agitate the mixture while conveying does not justify the position put forth by the Examiner in his Advisory Action that "[t]he motivation to combine Hoffmann and Chen comes from the fact that both patents disclose screws to mix the material being treated" and ignores the fact that Hoffmann requires that his screw move the material from an inlet end of the screw to an outlet end thereof and Chen's screw is incapable of doing that as noted above.

Accordingly, it is submitted that the rejection under § 103 based on Chen and that under § 103 rejection based upon the combined teachings of Hoffmann and Chen are unsustainable so that the Panel is requested to withdraw these rejections.

Respectfully submitted,

By: _____

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